

CLAIMS

1. A method for generating a UWB signal comprising the step of differentiating a clock signal once to obtain the UWB signal.
- 5 2. A method according to claim 1 further comprising the step of differentiating the UWB signal at least once to generate a monocyclical or a polycyclical UWB signal.
- 10 3. A method according to claim 1 further comprising the step of modulating a data signal with the UWB signal to obtain a modulated UWB signal.
4. A method according to claim 3 further comprising the step of differentiating the modulated UWB signal at least once to generate a monocyclical or a
15 polycyclical UWB signal.
5. The method of claim 3 wherein the modulated pulse is amplitude-modulated.
6. The method of claim 3 wherein the modulated pulse is pulse-position-
20 modulated.
7. A system comprising:
 - an amplifier having an input and an output;
 - negative feedback means;

a low-pass filtering means;
a DC decoupling means
the amplifier providing an output of the system to the low-pass filtering
means to produce a low-pass filtered output;
5 the negative feedback means feeding back the low-pass filtered output of
the amplifier is negatively feedback to the input means of the amplifier;
the DC decoupling means removing DC components from the amplifier
output; wherein
the output of the system is an amplified differential of an input signal to
10 the system; and
whereby
a UWB pulse is produced for transmission.

8. A system as claimed in claim 7 wherein the amplifier means comprises of a
15 biased transistor.

9. A system as claimed in claims 7 or 8 wherein the input signal is a clock
signal.

20 10. A system as claimed in claims 7 or 8 wherein the input signal is a saw tooth
signal.

11. A system as claimed in claims 7 or 8 wherein the input signal is a pulse
signal.

12. A system as claimed in claims 7 or 8 wherein the system is implemented in an Integrated Circuit.

5 13. A system as claimed in claims 7 to 12 wherein the system comprises current-voltage topology.

14. A system as claimed in claims 7 to 12 wherein the system comprises voltage-voltage topology.

10

15. A system as claimed in claims 7 to 12 wherein the system comprises voltage-current topology.

16. A system as claimed in claims 7 to 12 wherein the system comprises

15 current-current topology.